



TITLE:

Problems on the Breeding of Insects for
Biological Assay of Insecticides. (XVIII) : On
the Number of Larval Moults in the "Noheji"
Race of the Gypsy Moth, *Lymantria dispar* L

AUTHOR(S):

Nagasawa, Sumio

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ABSTRACTS

**Problems on the Breeding of Insects for Biological Assay
of Insecticides. (XVI)**

On the Increment of Size of Faecal Pellets following the Growth in

Larva of the Gypsy Moth, *Lymantria dispar* L.

Botyu-Kagaku, 22, 176-82 (1957). (English edition)

Sumio NAGASAWA

(Ohono Laboratory)

Under the constant environmental condition of 25°C and 89% relative humidity, a male larva of the gypsy moth was reared on leaves of the zelkova tree. The width of faecal pellets, i.e. the maximum diameter which meets the longitudinal axis at right angle, was measured, and the rates of its increase on successive days as well as in successive instars were determined. While the trend of the increase of the mean log-width of faecal pellets on successive days showed a curvilinear relation, that of the increase in successive instars showed two straight lines. The same trend was also found in the growth of the width of head capsule. The determination of instar by the size of faecal pellets is possible if we determine the mean width of faecal pellets excreted on successive days separately.

**Problems on the Breeding of Insect for Biological Assay
of Insecticides. (XVII)**

On the Number of Larval Moults in the "Takatsuki" Race of the Gypsy

Moth, *Lymantria dispar* L.

Japan. J. Appl. Entomol. Zool. 1, 27-31 (1957). (English edition)

**Problems on the Breeding of Insects for Biological Assay
of Insecticides. (XVIII)**

On the Number of Larval Moults in the "Noheji" Race of the Gypsy

Moth, *Lymantria dispar* L.

Botyu-Kagaku, 22, 255-9 (1957)

Sumio NAGASAWA

(Ohono Laboratory)

Under the environmental condition of 25°C and 89% relative humidity, the larvae of the "Takatsuki" and "Noheji" races of the gypsy moth, *Lymantria dispar* L., were reared separately on leaves of the zelkova tree, *Zelkova serrata* Makino. The females of the "Takatsuki" race of the gypsy moth moulted 6 or

ABSTRACTS

7 times in their larval stage and the males moulted 5 or 6 times. The females of the "Noheji" race of the gypsy moth moulted 5, 6 or 7 times in their larval stage and the males moulted 5 or 6 times. In all of these cases mentioned above, the relations of log-width of exuviae of head capsule to instar number were found to be represented by two straight lines intersecting at a point between the third and the fourth instars. We shall be able to determine the instar to which a larva belongs by measuring width of exuviae of the head capsule in the larvae ranging from the 1st to the 3rd instars, but we shall fail to tell the instar number by this method in the larvae ranging from the 4th to the last instars.